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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,042	09/25/2000	Christoph Widmer	32992	2828

116 7590 01/04/2007

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EXAMINER
MEI, XU

ART UNIT	PAPER NUMBER
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/669,042	WIDMER ET AL.	
	Examiner	Art Unit	
	Xu Mei	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-8 and 10-20* is/are pending in the application.

4a) Of the above claim(s) *16-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the applicant's amendment dated 10/10/2006.

Election/Restrictions

2. Applicant's election without traverse of claims 2-8 and 10-15 in the reply filed on 10/10/2006 is acknowledged.

Claims 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/10/2006.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 4, 7, 8, and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanright (US-5,875,254).

Regarding Claim 8, Hanright discloses a hearing device (see Fig. 1b) comprising an acoustical/electrical converter (microphone 6/8) with an acoustical input being linked by means of a channel (14/16) to a coupling opening arrangement exclusively at an

outer surface of said device adapted to be exposed to ambient when an individual wears said hearing device (channel 14 /16 is vented to outer surface), said device having a unitary shell member (housing 2) forming said outer surface and defining an inner space distinct from said channel, said channel comprising a part provided in and along said shell member a substantial portion of the channel following a contour of the outer surface, and the channel being formed in the material of said shell member (Fig. 1b).

Regarding Claim 10, Hanright discloses a hearing device comprising: a one-part shell member (2) forming at least a portion of an outer surface of said device, said shell member defining an interior space of said device (inner space in Fig. 1b), said shell member (2) forming a channel (14/16) out of the material of said shell member, said channel being formed in and along said shell member and being distinct of said interior space (channel 14/16 to outer surface), and, over at least a substantial segment of its length, said channel running essentially parallel to said outer surface (as see in Fig. 1b where channel 14/16 is running essentially parallel to said outer surface); and at least one of an acoustical/electrical converter (microphone 6/8) and an electrical/acoustical converter (receiver or speaker 10) including an acoustical input or output, respectively, wherein said input or output is acoustically linked to a coupling opening (van tube 22) via said channel forming an acoustic path from said input or output to said coupling opening exclusively at an outer surface of said device and adapted to be exposed to ambient or an ear canal of an individual wearing said hearing device but not both, and further wherein said channel is tuned to have specific acoustical characteristics.

Regarding Claim 11, Hanright discloses a hearing device comprising: a one-part shell member (2) forming at least a portion of an outer surface of said device (12), said shell member defining an interior space of said device (inner space in Fig. 1b), said shell member forming a channel (14/16) out of the material of said shell member, said channel being formed in and along said shell member a substantial portion of the channel following a contour of the outer surface, and the channel being formed in the material of said shell member (see Fig. 1b) also being distinct from said interior space; an electrical/acoustical converter including an acoustical output (receiver or speaker 10), wherein an acoustic path (van tube 22) is formed from said output to a coupling opening entirely in said shell member using said channel, whereby said output is acoustically linked to said coupling opening via said channel along at least some portion of said acoustic path.

Regarding Claim 4, Hanright further discloses the channel extends parallel to the outer surface of the device (Fig. 1b, one of 14/16 is parallel to sides of device).

Regarding Claim 7, Hanright further discloses another channel that extends in parallel fashion (other of 14/16 to outer surface).

Regarding Claims 12 and 13, Hanright further discloses the output (output 18) is to be exposed to an ear canal of an individual wearing device.

Regarding Claim 14, Hanright further discloses an output linked to an acoustic opening (van tube is acoustically linked to outer surface).

Regarding Claim 15, Hanright further discloses acoustic input directly linked to said channel (14/16 is directly linked to outer surface).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanright in view of Johnson (US Patent 4,311,206).

Regarding claim 2, Hanright discloses a hearing device comprising: a one-part shell member forming at least a portion of an outer surface of said device (Fig. 1 shell 2), said shell member defining an interior space of said device (inner space as shown in Fig. 1b), said shell member forming a channel (14/16) out of the material of said shell member, said channel being formed in and along said shell member and being distinct of said interior space, and, over at least a substantial segment of its length, said channel running essentially parallel to said outer surface (channel 14/16 from transducer 6/8 to outer surface); and at least one of an acoustical/electrical converter (6/8) and an electrical/acoustical converter (receiver or speaker 10) including an acoustical input or output, respectively, wherein said input or output is acoustically linked to a coupling opening (18) via said channel forming an acoustic path from said input or output to said coupling opening exclusively at an outer surface of said device and adapted to be exposed to ambient or an ear canal of an individual wearing said

hearing device but not both (channel 14/16 is linked to outer surface). Hanright does not disclose the channel is varying in cross-sectional dimensions or shapes and tuned to have specific acoustical characteristics.

Johnson discloses an ear-plug device (Figure 5) with a channel used for acoustic conduction (references 54) varying in cross-sectional dimensions over the length of the ear-plug device. Johnson teaches the shape provides a resonance system that will resonate at selected frequencies when acoustic energy is applied. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the hearing aid disclosed by Hanright with the varying cross-sectional (i.e. tuned) channel as disclosed by Johnson in order to produce a more customized audio output that will resonate at selected frequencies when acoustic energy is applied.

Regarding Claim 3, Hanright discloses a device as stated apropos of claim 8 and 11 but does not disclose a matching stub line. Johnson discloses an ear-plug device (Figure 5) with a channel used for acoustic conduction (references 54) varying in cross-sectional dimensions over the length (matching stub line) of the ear-plug device. Johnson teaches the shape provides a resonance system that will resonate at selected frequencies when acoustic energy is applied. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the hearing aid disclosed by Hanright with the varying cross-sectional (i.e. tuned) channel having a matching stub line as disclosed by Johnson in order to produce a more customized audio output that will resonate at selected frequencies when acoustic energy is applied.

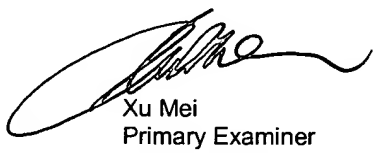
Regarding Claims 5-6, Johnson further discloses a custom molded, in the ear hearing aid (Col. 3, lines 17-20). And the van tube 22 as shown by Hanright is part of a venting system for the eardrum.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Xu Mei
Primary Examiner
Art Unit 2615
12/12/2006